Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	

REPLY COMMENTS OF CTIA—THE WIRELESS ASSOCIATION®

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To: The Commission

I. INTRODUCTION AND SUMMARY.

CTIA – The Wireless Association® ("CTIA") files these Reply Comments urging the Commission to recognize the value of mobility and wireless broadband to U.S. consumers, and detailing the changes to the wireless market in the last 18 months. Those changes – absent government regulation – demonstrate the benefits of being cautious before regulating a competitive industry. However, just as there are areas where over-regulation by the Commission could hamper the continued evolution of the wireless ecosystem, CTIA believes there are areas where Commission intervention is necessary to facilitate the continued leadership of the U.S. and that the Commission should address them in short order.

- Commission recognition that wireless networks are different than other broadband networks and that the Commission's wireline Broadband Policy Statement should not be applied to competitive wireless networks.

- A grant of CTIA's Petition seeking a "shot clock" on local zoning authorities' consideration of tower siting applications in recognition that timely deployment of wireless tower facilities is critical to ensuring consumers' access to wireless broadband services.

- Identification and allocation of additional licensed spectrum resources for U.S. wireless broadband providers.

- Commission action to speed access to AWS-1, BRS and 700 MHz spectrum that already has been assigned, but that is encumbered by other users – either unauthorized or subject to relocation.

- Commission action to modernize the universal service and intercarrier compensation regimes to reflect the modern broadband reality.

CTIA's Reply Comments look at the wireless broadband industry through the lens Blair Levin has designed to craft the National Broadband Plan and provides facts to answer his four questions:

- What is the current situation?
- What will be the near term situation without a change in government policy?
- What will be the areas where there are demonstrable public interest harms?
- What are ways of lessening the public interest harms?

II. THE CURRENT STATE OF WIRELESS BROADBAND.

As the Commission begins to review the record in this proceeding, CTIA would like to reiterate the role that wireless is playing in delivering broadband to the person. Wireless can, and should, play a key role in the Nation's Broadband Plan. With the targeted action by the FCC in a few key areas, and with patience by the Commission in other areas, wireless can continue to be a key driver for broadband adoption. The statistics highlighted below, and the rest of the CTIA's reply comments, show that wireless is a different form of broadband than cable and wireline, that not only is being actively adopted by consumers, but that in the absence of regulatory intervention, is evolving rapidly and delivering services unimagined just a short time ago. The following statistics provide information on both wireless deployment and wireless adoption.

Wireless Broadband Deployment

- Over 78% of the wireless devices in America are mobile broadband capable.
- According to FCC data, more than 90% of Americans live in areas with more than four 3G wireless broadband service providers.

- More consumers have adopted wireless broadband between 2005 and 2007 (the last year the FCC has released data for high-speed subscribers) than DSL and cable, combined.

- Over 65,000 applications have been developed for the mobile wireless broadband environment, with many more on the way. In less than one year, seven companies have opened, or have announced that they will open, applications stores.

The unique aspects that wireless broadband brings to the consumer broadband market in the United States and the clear value that American consumers have placed on mobile access to broadband should not be understated. Over the last decade, the technologies and marketplace of America's communications sector have evolved in ways that demonstrate the high value American consumers place on mobile voice and broadband services. In 1997, there were approximately 55 million wireless telephone subscribers.[1] By year-end 2008, that number had risen almost five-fold, to more than 270 million.[2] As quickly as the number of wireless voice subscribers grew, the number of wireless broadband subscribers is growing even more dramatically. More and more Americans are proving that the concept of a "third pipe to the home" has been surpassed by the marketplace. Consumers want broadband to the person.

As CTIA has stressed to the Commission, wireless is not a third broadband pipe into the *home*, but rather broadband to the *person*, wherever they are, whenever they want access to information. Going forward, all discussion involving broadband, whether at the

[1] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Third Annual CMRS Competition Report*, 13 FCC Rcd 19746 app. B, at B-2 (1998).

[2] *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile* Services, WT Docket No. 07-71, *Twelfth Annual CMRS Competition Report*, WT Docket No. 07-71, 23 FCC Rcd 2241, 2246 ¶ 2, FCC 08-28 (rel. Feb. 4, 2008) ("*Twelfth Report*") at 6. By year-end 2008, CTIA's semi-annual survey found that wireless subscribership had risen to 270,333,881.

Commission or in Congress, should be based on the notion of facilitating broadband to the person. Only through mobility can the U.S. achieve truly ubiquitous broadband availability.

Mobile broadband additions are driving the growth of high-speed lines overall, and mobile broadband utilization rates are accelerating at breakneck speed. As wireless networks continue to evolve, this trend will only continue. The Commission's data shows that, since 2005, mobile wireless providers have been the fastest-growing providers of both high-speed lines (over 200 kbps in at least one direction) and advanced service lines (over 200 kbps in both directions), with subscriber counts for high-speed lines more than *doubling* and advanced service lines more than *tripling* from just one year earlier.[3] The report further demonstrates that wireless broadband additions from December 2006 to December 2007 (the most recent data available) outpaced, by nearly three to one, the additions for cable companies and wireline telephone companies combined.[4] As of December 2007, mobile wireless providers served more than 15 million customers with advanced service lines – nearly 20 percent of all advanced services.[5]

Wireless Adoption Statistics

- Mobile broadband usage is skyrocketing. Data from the Pew Internet & American Life Project reveal that as of December 2007, 58 percent of adults used mobile devices for non-voice activities, and 41 percent of adults logged onto the Internet wirelessly.[6]

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[3] Report of the Wireline Competition Bureau, Industry Analysis and Technology Division, *High-Speed Services for Internet Access: Status as of December 31, 2007*, at tbls.1-2 (rel. Jan. 2009), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-287962A1.pdf.

[4] *Id.*

[5] *Id.*at tbl. 2.

[6] John Horrigan, Associate Director, Pew Internet & American Life Project, Data Memo, *Mobile Access to Data and Information* 1 (March 2008), *available at* http://www.pewinternet.org/pdfs/PIP_Mobile.Data.Access.pdf) ("Pew Study") at 1.

- Mobile wireless broadband is proving to be more rapidly adopted and used in communities that have traditionally trailed in broadband adoption, such as low-income and minority consumers.[7]

- For use of non-voice data applications on handhelds, members of minority communities are more likely than others to have adopted daily use of wireless broadband. Hispanics and African Americans lead the way relative to white Americans.[8]

- Half of African Americans and 56% of English-speaking Latinos with cell phones, on a typical day, use at least one of 10 non-voice data applications, such as taking pictures, accessing the Internet for news, playing music, or texting.[9]

    - By contrast, 38% of white Americans conduct these kinds of activities on a wireless handheld device on the average day.

- Even lower-income Americans with cell phones (61%) are active in using non-voice data applications on cell phones; 44% of cell users in households with incomes below $30,000 annually do one such non-voice data activity on a typical day.[10]

- Wireless broadband consumers also are enjoying a myriad of service offerings. In order to accommodate the varying needs, wants and budgets of American consumers, the wireless industry offers wireless broadband service in a variety of ways.

    - Wireless consumers have service plans for every need. From heavy Internet users who benefit from bucket plans and bundling, to low-volume or low-income users who pay only for the services they use, and everyone in between. All benefit from the flexibility of wireless broadband.

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[7] *See* ICT Policy Division, *The Role of Mobile Phones in Sustainable Rural Poverty Education*, June 15, 2008, *available at* http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/The_Role_of_Mobile_Phones_in_Sustainable_Rural_Poverty_Reduction_June_2008.pdf; *see also* Centers for Disease Control and Prevention (CDC), *Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July-December 2008*, rel. May 6, 2009, *available at* http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless200905.pdf.

[8] *See* John Horrigan, *Seeding The Cloud: What Mobile Access Means for Usage Patterns and Online Content*, Pew Internet & American Life Project, *available at* http://www.pewinternet.org/~/media//Files/Reports/2008/PIP_Users.and.Cloud.pdf.pdf.

[9] *Id.*

[10] *Id.*

- Different wireless devices – like smartphones, aircards, and netbooks – are providing consumers with the increasingly dynamic Internet experiences that they demand from their wireless providers.

III. ALTHOUGH THE WIRELESS MARKET WILL CONTINUE TO EVOLVE IN THE ABSENCE OF INTERVENTION, THE GOVERNMENT CAN DO MORE TO HELP SPUR GROWTH AN INNOVATION.

Mr. Levin's presentation to the Commission asks participants in the National Broadband Plan proceeding to describe how the market will evolve in the absence of government intervention.[11] While CTIA believes that the deregulatory approach of the government to the commercial wireless industry has proven to be a successful approach, CTIA is not arguing for the Commission to surrender regulatory oversight, but rather move with caution only when necessary. Recently, in response to renewed efforts by Skype Communications S.A.R.L ("Skype") to impose *Carterfone* style regulation on the wireless industry, CTIA took the opportunity to demonstrate for the Commission the reality of the last two years of change in the wireless industry, and why it makes sense to view such self-serving business proposals with caution.

In the two years since Skype and CTIA looked into their respective crystal balls, as described above it is the vibrantly competition, consumer-driven vision that CTIA outlined for the Commission that has come to fruition – without government intervention – in the wireless industry. CTIA believes that this constantly-evolving, financially-healthy, consumer-driven industry is exactly the place where the government should analyze what would happen without government intervention, before it moves down the path of regulation

[11] Blair Levin, *The FCC and Broadband: The Next 230 Days* at 8, Report delivered to the FCC at the Commission's July 2, 2009 meeting, *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291879A1.pdf.

However, just as there are areas where CTIA believes that the Commission should move with caution before regulating, there are also areas where in order to facilitate the continued evolution and innovation, the FCC should act. CTIA describes in more detail below the specific changes that are necessary.

A. CTIA Believes that Commission Focus on Access to Additional Licensed Spectrum is Necessary to Keep Pace with Other Countries and to Meet Growing Demand.

Despite the fact that U.S. wireless carriers are among the most efficient users of spectrum worldwide, at the current rate of growth consumer demand for wireless broadband will outstrip carriers' network capacity. As use of wireless "smartphones" proliferates – 23 percent of the wireless handsets sold in the U.S. in the fourth quarter of 2008 were smartphones[12] – so does consumers' demand for Internet data and the applications that run on smartphones.[13] Wireless network management policies are currently managing high consumer demand, but as handset offerings and data speeds continue to increase, consumption, and in particular bandwidth use, will continue to grow at an unprecedented rate. Accordingly, U.S. wireless carriers will need access to additional spectrum.

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[12] *See* Comments of CTIA at 11 (citing Press Release, The NPD Group, THE NPD GROUP: DESPITE RECESSION, U.S. SMARTPHONE MARKET IS GROWING- Smartphones gain share against all other handsets in 2008, as prices become more competitive (Mar. 3, 2009), *available at* http://www.npd.com/press/releases/press_090303.html).

[13] *See* Alan Weissberger, *New apps and smart phones to drive demand for 4G mobile networks*, Viodi, Dec., 17, 2008, *available at* http://viodi.com/2009/04/18/new-apps-and-smart-phones-to-drive-demand-for-4g-mobile-networks/; *see also* Andrew Berg**,** *Report: Demand for Mobile TV, Video Increases in Q1*, WirelessWeek, May 11, 2009, *available at* http://www.wirelessweek.com/News-Demand-MobileTV-Video-Q1-051109.aspx; *see also* Press Release, comScore, Inc., comScore Releases Inaugural Report on Mobile Financial Services Market, July 9, 2009, *available at* http://www.istockanalyst.com/article/viewiStockNews/articleid/3341230.

Wireless carriers face few options for increasing capacity to their networks. Essentially, carriers have three options. First, carriers can upgrade the air interface between the carrier network and the handset to increase spectrum efficiency. Carriers have and continue to upgrade their networks in this manner. In fact, as described above wireless carriers spend more than $22 billion per year on network expansion and upgrade.

Second, wireless providers can decrease the size of cells within the network to increase frequency reuse. Wireless carrier networks are constantly in flux for this very reason. As carriers obtain tower siting approvals and add sites to their networks, network capacity (and coverage) increase accordingly. Additionally, carrier efforts to increase consumer access to picocells and Wi-Fi calling also decrease network load and enhance spectral efficiency. Absent Commission action on CTIA's pending Tower Siting "Shot Clock" Petition, however, carriers will continue to suffer from unreasonable delay by local zoning authorities as they attempt to improve wireless service quality.

Finally, air interface and network improvements have limitations. If the Commission truly intends to provide the tools for wireless carriers to continue to provide broadband access and consumer benefits in the 21st century it must address the lack of spectrum available to wireless providers. As described *infra*, the United States falls woefully behind other developed nations in providing wireless broadband providers with the spectrum needed to fulfill consumers' broadband demands now, and most certainly in the future. According to Cisco, wireless data use is expected in double every two years through 2012.[14] A great illustration of this evolution is a recently reported statistic on

[14] Cisco Visual Networking Index, "Approaching the Zettabyte Era" at 3, June 16, 2008, *available at* http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481374.pdf.

mobile uploads to YouTube. According to YouTube's blog, mobile uploads to YouTube have increased 1700% in the last six months – and an increase of more than 400% per day in the week following the launch of the iPhone 3GS.[15] Without additional capacity, the continued innovation wireless consumers are enjoying may be at risk as innovation at the network edge is a direct result of investment and innovation in the network core and in wireless devices.

B. The Wireless Industry Need Help From the FCC Both to Clear AWS, BRS and 700 MHz Spectrum Already Auctioned and Licensed, and to Facilitate the Process for Tower Siting.

As CTIA details below, hurdles to clearing spectrum of interference, delays in the tower siting process and rapidly increasing consumer demand for wireless broadband services raise the cost of providing wireless broadband service, limit coverage areas and plans, and place a strain on wireless broadband networks. Despite carrier investment in facilities, unless these hurdles are addressed consumers who rely on wireless broadband to meet their broadband needs will be disproportionately impacted. Because low-income and minority consumers are adopting wireless-only lifestyles at a faster rate than other consumers, Commission action to lower barriers to wireless network buildout will be of particular benefit to these communities. Failure to adopt the proposals described in this filing will further delay the day when all low-income wireless broadband users can fully participate in the broadband age.

[15] Posting by Dwipal Desai, Product Manager, and Mia Quagliarello, Community Manager to YouTube Blog, "Mobile Uploads to YouTube Increase Exponentially," http://youtube-global.blogspot.com/2009/06/mobile-uploads-to-youtube-increase_5122.html (June 25, 2009).

IV. THE GOVERNMENT SHOULD MOVE AGGRESSIVELY TO ADDRESS POTENTIAL HARMS.

There are multiple ways that the Commission can help the wireless industry to continue to be a consumer-focused, financially-healthy, innovative contributor to the U.S. economy.

A. The Commission Should Recognize that Wireless Networks are Different than Other Broadband Networks, and that the Broadband Policy Statement Should Not be Applied.

"[T]he degree of 'net neutrality' (if any) will be determined by consumer choice and therefore does not require regulation."[16] This conclusion was drawn by Ofcom based on the analysis of the wireless industry in the United Kingdom – an industry that has five network providers in total. On July 8 of this year, Ofcom concluded, after significant review of its mobile wireless industry, that "the UK has the most competitive mobile industry in Europe with five mobile network operators,"[17] and that "Ofcom does not propose to undertake a wider formal market review of the mobile sector"[18] because "competition is the most important stimulus for ensuring that consumers benefit from advances in the mobile sector through service and technology innovation, fair prices and environment."[19]

Surely, if the UK wireless market is competitive enough for consumer choice to drive net neutrality without regulation, the more competitive US industry similarly does not need net neutrality regulation. CTIA has submitted information over the last 18

[16] "Mostly Mobile", Consultation, UK Office of Communications, at sec. 4.88, *available at* http://www.ofcom.org.uk/consult/condocs/msa/msa.pdf (last accessed July 13, 2009).

[17] Press Release, Ofcom, Ofcom pledges further consumer protection for mobile users and publishes 3G mobile coverage maps for the first time (July 8, 2009), *available at* http://www.ofcom.org.uk/media/news/2009/07/nr_20090708.

[18] *Id.*

[19] "Mostly Mobile", Consultation, UK Office of Communications *available at* http://www.ofcom.org.uk/consult/condocs/msa/msa.pdf (last accessed July 13, 2009).

months detailing the incredible level of competition in the U.S. mobile wireless industry. With more than 140 facilities-based wireless carriers serving more than 270 million U.S. subscribers, the number of wireless providers competing for consumers in the United States far outpaces the UK. Moreover, those five carriers in the UK control all of the wireless traffic in the UK. By contrast, as of year-end 2008, the four nationwide carriers represented 85% of the market, with no individual provider representing more than 30% of the nation's wireless subscribers.[20]

Over the last two years, several Petitions at the Commission, as well as the Commission's Annual CMRS Competition Report Public Notices have asked whether the Commission's Broadband Policy Statement applies, or should be applied, to wireless broadband network. The simple facts remain clear that wireless broadband networks are fundamentally different than other broadband networks for many reasons. They are different in part because of their reliance on spectrum to provide last-mile connections to end-users as well as because the core functionalities – the delivery of voice (including 911) and data – are shared by the same platform. An impact due to data usage will impact voice usage. The Commission should not attempt to shoehorn the modern, innovative wireless broadband industry into a definition crafted and applied for use on wireline technologies. We urge the Commission to affirmatively recognize the different circumstances that militate against attempting to apply wireline rules to a wireless world.

[20] *See* Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA, to Marlene H. Dortch, Secretary, Federal Communications Commission, RM-11361, GN Docket No. 09-51, and WC Docket No. 07-52 (filed May 12, 2009) at 6, *available at* http://files.ctia.org/pdf/filings/US_Wireless_Industry_and_the_World_Ex_Parte.pdf (*citing* Glen Campbell, et al., "Global Wireless Matrix: 4Q08).

The underlying infrastructure of wireless networks, including spectrum, as well as the tight and coordinated integration of customer equipment with the network, make wireless significantly different from wired broadband networks:

- **The capacity of a wireless cell site is shared between all users in that cell.** Unlike wired broadband, where each user has a dedicated pipe to their home, the wireless user must share the available bandwidth with other users in their vicinity.[21]

- **The capacity of a cell is shared between all services running over the network.** Unlike cable or telephone networks, voice and data use share the capacity of the cell. Whereas data use doesn't impact the provision of video programming on a cable network, high data use on a wireless network has the potential to exhaust the capacity of a cell to make voice calls.

- **Wireless providers cannot "build their way out" of spectrum constraints.** Unlike wired services that can add capacity through greater buildout, constraints on expansion of network capacity are a reality for spectrum-based services. In the absence of significant additional spectrum allocations, wireless networks must be managed to maximize the consumer benefit from their network provider.

Affirmative recognition of the differences between wired and wireless networks, as CTIA has advocated, and as echoed by several other parties in their comments in this docket,[22] necessitate recognition that the Commission's Broadband Policy Statement is ill-suited for application to wireless networks. Wireless carriers' network management tools currently strike a content-neutral balance between the need to manage high-bandwidth applications when spectrum-constrained networks become congested,

[21] *See* Opposition of CTIA, RM-11361 (filed Apr. 30, 2007), Attachment C (Jackson Paper) at 3.1.1; *see also* Marius Schwartz and Federico Mini, "Hanging up on *Carterfone*: The Economic Case Against Access Regulation," Mobile Wireless, May 2, 2007, at 19.

[22] *See, e.g.*, Comments of CTIA at 27-30; *see also* Comments of Google Inc. at 28-29; *see also* Comments of Mobile Future at 14-15; *see also* Comments of Motorola, Inc. at 21; *see also* Comments of Verizon and Verizon Wireless at 103-107, GN Docket No. 09-51 (filed June 8, 2009).

with access to the capacity and capabilities that have brought innovation to wireless consumers.

B. Timely Deployment of Wireless Tower Facilities is Critical to Ensuring Consumers' Access to Wireless Broadband Services

The record is replete with support for substantial and much-needed action to relieve the delays that threaten to derail expeditious broadband deployment in this country. As widely recognized by numerous commenters, continued growth depends on timely tower siting.[23] Accordingly, CTIA urges the Commission to give effect to a comprehensive National Broadband Plan by granting CTIA's Petition for Declaratory Ruling to clarify provisions of the Act regarding state and local review of wireless facility siting applications. In many areas, local zoning policies are frustrating the goals of the Act and delaying the provision of wireless broadband services to millions of Americans. CTIA compiled data on siting from multiple members in advance of drafting its Petition.

- Collectively, those members have **more than 3,300 wireless siting applications pending** before local jurisdictions.
- Of those, **approximately 760 have been pending final action for more than one year.**
- More than **180 such applications have been awaiting final action for *more than 3 years*.**
- Even where the wireless siting application merely seeks to collocate on an existing site, delay may be substantial. Nearly **350 of the 760 applications pending for more than one year are collocation requests, with approximately 135 of these pending for more than 3 years.**

[23] *See, e.g.*, Comments of Alcatel – Lucent at 10-11; *see also* Comments of Clearwire at 9; *see also* Comments of CCIA at 8; *see also* Comments of FiberTower at 13-17; *see also* Comments of Google Inc. at 42; *see also* Comments of The Progress and Freedom Foundation at 9; *see also* Comments of Motorola, Inc. at 11; *see also* Comments of PCIA and the DAS Forum at 6-9; *see also* Comments of Rural Telecommunications Group at 7-8; *see also* Comments of T-Mobile USA, Inc. at 21-22; *see also* Comments of Verizon and Verizon Wireless at 63-68; *see also* Comments of WCAI at 25-30.

These figures likely understate the true impact of the delays as CTIA compiled this information prior to carriers commencing buildout of AWS-1 and 700 MHz licenses. These delays, slowing the deployment of towers designed to provide 3G services and beyond, will negatively impact broadband service.

Given the clear intent to facilitate expeditious wireless broadband build-out and Section 332(c)(7)(B)'s limits on the zoning review process,[24] CTIA reiterates its request for a declaratory ruling that: (i) clarifies the time period in which a state or local zoning authority must take action on a wireless facility siting request under Section 332(c)(7)(B); (ii) declares that a zoning authority's failure to act within the relevant time frame will give rise to a "deemed grant" of the application, or alternatively will warrant a court-ordered injunction granting the application unless the zoning authority can justify the delay; (iii) clarifies that Section 332(c)(7)(B)(i) bars zoning decisions that have the effect of prohibiting a particular provider from offering service in a given area; and (iv) declares that zoning ordinances requiring variances for all wireless siting requests – without regard to a facility's location or scope – are unlawful and will be struck down if challenged in the context of a Section 253 preemption action.

In addition, in those cases where new tower construction is simply infeasible, placing wireless communications equipment on existing electric utility distribution poles is becoming an increasingly important solution for achieving reliable "last mile" wireless broadband service. This is also important in residential neighborhoods and areas where consumers expect wireless coverage but oppose the aesthetic impact of larger wireless towers. Several commenters agreed with CTIA's observations in its initial comments

[24] *See* Comments of CTIA- The Wireless Association® at 15-19; *see also* CTIA Petition for Declaratory Ruling at 14-16; *see also* CTIA Reply Comments at 4-8.

that, despite existing federal and state regulations that provide for rights of attachment and non-discrimination, difficulties and delays in negotiating and obtaining fair pole attachment agreements covering wireless attachments threatens current and future broadband deployment.[25] Accordingly, CTIA urges the FCC to clarify and affirm its rules regarding nondiscriminatory and reasonable rates for wireless pole access. CTIA respectfully reiterates its call for the Commission to: (1) affirm its tentative conclusion to set a unified rate for all providers capable of providing broadband service, which rate should be as low as possible for the electric utilities to receive just compensation; (2) establish a presumption for space used by a wireless attachment and specify that "Usable Space" includes the pole top; and (3) address electric utilities' unsubstantiated objections to wireless attachments based on RF emissions and safety issues. CTIA respectfully urges the Commission to take these important steps to avoid the harms that threaten the Act's goal of "…deployment *on a reasonable and timely basis* of advanced telecommunications capability to all Americans."[26]

C. The Commission Should Include Access to Additional Spectrum in its National Broadband Plan and Immediately Begin by Pairing and Bringing to Auction Spectrum in the 1.7 GHz and 2.1 GHz Bands.

As CTIA noted in its initial comments, it is critical for the Commission to identify additional spectrum for reallocation to licensed CMRS use. CTIA is preparing a filing

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[25] *See, e.g.*, Comments of American Cable Association at 8-9; *see also* Comments of Clearwire at 9; *see also* Comments of Comcast at 66; *see also* Comments of CCIA at 8; *see also* Comments of FiberTower at 13; *see also* Comments of Level 3 Communications at 17-18; *see also* Comments of NCTA at 35-36; *see also* Comments of PCIA and the DAS Forum at 4-7; *see also* Comments of T-Mobile USA, Inc. at 22-23; *see also* Comments of Windstream Communications at 4, 18-21; *see also* Comments of WCAI at 25-30.

[26] Telecommunications Act of 1996 § 706 (emphasis added), reproduced in 47 U.S.C. § 157(c) ("1996 Act"); *see also Promotion of Competitive Networks in Local Telecommunications Markets*, WT Docket No. 99-217, *Notice of Proposed Rulemaking and Notice of Inquiry*, 14 FCC Rcd. 12673, 12691 ¶ 33 (1999).

that will highlight the spectrum that is in the pipeline for other countries, will make the case for the need to reallocate more licensed spectrum, and will propose a path for beginning the process. This is a necessary step in order to accommodate wireless broadband demand that is rapidly outstripping capacity available on wireless broadband networks. As a first step toward bringing much needed spectrum resources to U.S. wireless broadband providers, the Commission should begin by pairing and bringing to auction 50 MHz in the 1.7 GHz and 2.1 GHz spectrum bands. This rational step will lead to increased capacity for U.S. wireless broadband consumers. Note, however, that this is simply the beginning of what must be a much greater effort to identify and reallocate significantly more spectrum for licensed wireless broadband use.

Despite carriers' network investments, because spectrum is a limited resource, wireless carriers cannot simply "build their way out" of capacity problems. Increasing U.S. mobile data use is placing a strain on wireless providers' existing network infrastructure. In order to continue to meet the needs of U.S. wireless broadband consumers additional spectrum must be identified, allocated and made available to wireless providers.[27] CTIA urges the Commission to identify additional spectrum resources for wireless broadband providers in its National Broadband Plan report and immediately begin the lengthy process of identification, allocation, auction and clearing of new spectrum bands.

D. The Commission Should Facilitate more Efficient Clearing of Spectrum Already Allocated and Auctioned for CMRS.

In addition to allocating additional resources for wireless broadband provision, Commission action to speed access to existing allocated spectrum will provide short-term

[27] *See generally* Comments of CTIA – The Wireless Association®, WT Dkt. No. 09-66 (filed June 15, 2009).

relief for congested wireless networks and wireless providers attempting to expand or offer service in underserved areas. Existing AWS-1, BRS and 700 MHz licensees face a myriad of impediments to use of the bands to provide service.

In the AWS-1 band, for example, companies like T-Mobile, Leap Wireless, and MetroPCS acquired significant spectrum in the AWS-1 auction to both serve areas that they previously serve and to expand high-speed wireless offerings.[28] These same licensees, however, must clear incumbent licensees and government agencies, some of whom continue to delay their coordination and relocation obligations. Every extra day of delay impacts broadband deployment.

Another spectrum band suffering from impediments to full deployment is the BRS band. Licensees in the BRS bands must first relocate Broadcast Auxiliary Service licensees before full utilization of the bands for which they are licensed. Finally, the specter of interference in the 700 MHz bands – heralded as "beachfront property" for wireless broadband provision – from unauthorized wireless microphone users has held back the potential of this important allocation. Swift Commission action in these existing bands as well as the inclusion of efficient spectrum clearing in the National Broadband Plan will continue to provide wireless providers with the access to spectrum needed to swiftly meet consumer demand.

H. The Commission Should Move Quickly to Modernize the Universal Service and Intercarrier Compensation Systems to Reflect the Mobile Broadband Reality.

Universal Service. As CTIA explained in its initial comments, the Commission's efforts to develop a National Broadband Plan and to reform universal service both share the same fundamental goal: ensuring that all Americans have access to the

[28] *See id.* at 6.

communications and information technologies that they need to succeed. To achieve that goal, federal universal service programs should be repurposed to focus on consumers and reflect consumers' demand for mobile broadband services.

There is wide agreement among commenters that reform of the high cost universal service support mechanisms must be a central element of the Commission's National Broadband Plan, although there remain disagreements about the goals of a revised universal service program and how to achieve those goals.[29] The unfortunate reality is that the universal service system remains a vestige of the last century monopoly environment, designed to support fixed wireline voice networks, despite fundamental changes in technology and the competitive marketplace.

As the extensive record in this docket reveals, the current outdated policies create incentives for inefficiency, inhibit broadband deployment by reducing providers' incentives to adopt innovative technologies, and are no longer sustainable in today's technological and marketplace conditions.[30] The Commission invests an enormous amount of consumers' money into the universal service fund – roughly the same amount each year as the broadband grants provided through the Recovery Act. To ensure that

[29] *See, e.g.*, Comments of AT&T at 86; *see also* Comments of Benton Foundation *et. al.* at 56-57; *see also* Comments of Google Inc. at 23; *see also* Comments of Motorola, Inc. at 20; *see also* Comments of T-Mobile USA, Inc. at 24; *see also* Comments of Sprint Nextel at 38 ("To ensure the viability and predictability of the federal USF, and to help ensure competitive equity, these legacy voice-centric mechanisms must be drastically overhauled regardless of whether Congress and the Commission authorize additional federal support for broadband services."); *see also* Comments of Verizon and Verizon Wireless at 112.

[30] *See, e.g.*, Comments of AT&T at 86 ("The high-cost universal service funding system is also hopelessly out of touch with the forward movement in the industry, and is likewise in need of fundamental reform."); *see also* Comments of T-Mobile USA, Inc. at 23-24 ("The National Broadband Plan also cannot adequately promote build out of rural mobile broadband service without addressing the current USF regime, which distorts incentives for investment and is woefully outdated in light of today's technologies."); *see also* Comments of Verizon and Verizon Wireless at 112 ("Absent an overhaul, the antiquated federal universal service program will weigh down many of the exciting opportunities promised by innovations in the broadband space.").

these funds are used as efficiently as possible, the Commission should include as a key element of its National Broadband Plan a commitment and vision for reforming the universal service system.

The evidence of the marketplace demonstrates that consumers demand and need access to mobile services, particularly mobile broadband service. The record makes clear that mobile services, and more specifically, mobile broadband services, are highly valued by consumers.[31] Moreover, as Consumer Federation aptly observed: "[a]dvanced wireless technologies are extremely low in cost and deliver both mobile computing and broadband service that meets the needs of Americans at prices they can afford."[32]

Repurposing the high cost universal service fund – away from legacy services and toward mobile broadband services, which are so highly valued by consumers – is one of the most direct ways that the Commission can ensure rapid deployment of broadband not merely to the home but to the person.[33] Dedicated support for mobile broadband should encompass both infrastructure deployment and ongoing maintenance and operations costs, and should measure all providers' costs in an objective and efficient manner. Indeed, federal universal service policies should make the most efficient use of scarce

[31] *See, e.g.*, Comments of Mobile Future at 1, 3-4; *see also* Comments of Rural Cellular Association at 1, 22 ("the Commission's work, in large part, should focus on developing effective ways to spur the deployment of broadband, including mobile wireless broadband, in unserved and underserved areas throughout the Nation."); *see also* Comments of Sprint Nextel at 1; *see also* Comments of Wireless Communications Association Comments at 39-42.

[32] *See* Comments of Consumer Federation of America and Consumers Union at 13.

[33] *See, e.g.,* Comments of AT&T at 86 ("the Commission's real priority at this point should be to direct these scarce funds toward the construction of forward-looking broadband facilities that will support the next era of communications"); *see also* Comments of Rural Cellular Association at 4, 22 ("The most expeditious and efficient way for the Commission to promote the ubiquitous deployment of broadband networks is for the agency to 'reboot' its universal service support mechanisms so that these mechanisms are better vehicles for the advancement of the Commission's broadband goals.").

public resources and incent the deployment of the most efficient technologies, in order to minimize the burden on consumers that ultimately pay for universal service.

The universal service principle of competitive neutrality also requires that the system treat wireless services, and the carriers that provide them, evenhandedly with other providers.[34] The current high-cost program relies on wireless carriers to fund approximately 41% of contributions to universal service, yet the fund provides three times as much support for fully deployed legacy wireline technology as it provides for new technologies. This disparity exists, and is widening, despite the growing evidence that innovative services, such as mobile wireless, are more highly valued by consumers and not yet fully deployed in rural and high-cost areas. The Commission can no longer afford to allow universal service to remain a means to prop up outdated technology and failing business models but must redirect scarce funds toward the mobile services that are becoming so critical to all aspects of our economy.

Many commenters note the importance of stimulating demand and adoption of broadband services and agree with CTIA that a technology neutral low-income program can be used to support low-income consumers' access to mobile broadband services.[35] To meet the requirements of the Act, any such program must be open to all eligible

[34] *See, e.g.*, Comments of Alcatel-Lucent at 19; *see also* Comments of Motorola, Inc. at 20 ("The most appropriate course is for the Plan to create technologically neutral incentives for providers to offer the most advanced speeds that can be economically supported."); *see also* Comments of Rural Telecommunications Group at 8.

[35] *See, e.g.*, Comments of AT&T at 48-49; *see also* Comments of Benton Foundation *et al.* at 56-57; *see also* Comments of Cricket Communications, Inc. at 7; *see also* Comments of TracFone Wireless, Inc. at 7-8; *see also* Comments of T-Mobile USA, Inc. at 25; *see also* Comments of Qualcomm at 18 ("Qualcomm fully supports a fully funded pilot program to provide subsidized 3G-based devices and 3G broadband service initially to at least one million participants all over the US.").

providers, regardless of technology.[36] The Commission should strongly consider a program that provides low-income consumers a subscription discount that would permit the consumer, not the government, to choose the broadband service that best suits his or her needs. Such an approach would target broadband support to low-income communities, which have historically had lowest levels of broadband adoption, and would also promote the intermodal and intramodal competition that has driven innovation in broadband Internet access.

CTIA is also pleased to see wide agreement that the Commission must reform its USF contribution methodology to better reflect the ways U.S. consumers consume telecommunications and information services.[37] As the Commission recognized in the National Broadband Plan NOI, universal service contribution requirements affect the economics of service deployment. Once again, commenters have made clear that the existing revenues-based system is increasingly incompatible with the multi-dimensional telecommunication market.[38]

CTIA and others have encouraged the Commission to adopt a numbers- and capacity-based approach, which would more fairly distribute the responsibility for the program and more effectively sustain the base that supports the program. Such an

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[36] *See, e.g.*, Comments of AT&T at 49-50 ("Permitting participation by a wider range of providers will expand the scope of the Lifeline program and promote wider adoption of service by eligible consumers."); *see also* Comments of Time Warner Cable at 21 ("The national broadband plan should embrace and incorporate a similar initiative, provided that it is designed and implemented on a technologically neutral basis, and not tied to existing programs that are not technologically neutral in practice.").

[37] *See, e.g.*, Comments of AT&T at 87; *see also* Comments of Microsoft at 7; *see also* Comments of T-Mobile USA, Inc. at 26; *see also* Comments of Verizon and Verizon Wireless at 113 ("The current USF contribution system is not viable in the broadband era. It was designed for a world where telephone companies offered customers simple phone service with separate local and long distance services. That world no longer exists.").

[38] *See id.*

approach must be carefully tailored to ensure that low-income customers and wireless family plan subscribers do not bear an unreasonable share of the contribution obligations. As described above, the Commission must find a way to better use scarce universal service funding – targeting support to the mobile services that are increasingly becoming the communications mode of choice – but reform of the contribution system is another important prerequisite if the Commission decides to redirect universal service to meet the challenges of the broadband age.

Intercarrier Compensation. It is also critical for the Commission to fix the broken intercarrier compensation system, which is ill-equipped to meet the key goals of a National Broadband Plan, namely, promoting ubiquitous broadband deployment, advancing universal broadband adoption, and facilitating the transition to an all-IP world. There is wide agreement that the current intercarrier compensation system severely distorts the competitive marketplace and undermines the efficient deployment of next generation voice, data, and video services delivered over broadband capable facilities.[39]

The road to intercarrier compensation reform has been long, but the Commission is now presented with a unique opportunity through the development of a National Broadband Plan to commit to forward-looking reform of this byzantine set of rules. CTIA and others have laid out a clear path for the Commission's reform efforts.[40] By embracing a unified, cost-based rate for the termination of all telecommunications traffic

[39] *See, e.g.*, Comments of AT&T at 83-83 ("a 'complete reassessment' of the existing intercarrier compensation and universal service regime is needed in order to facilitate the transition to a broadband telecommunications infrastructure."); *see also* Comments of Level 3 Communications at 4; *see also* Comments of T-Mobile USA, Inc. at 23.

[40] CTIA has developed a Mutually Efficient Traffic Exchange ("METE") proposal as a holistic approach to the reform of the intercarrier compensation regime. *See* Comments of CTIA, CC Docket No. 01-92 (filed May 23, 2005); *see also* Comments of CTIA at 21-33 , CC Docket No. 01-92, (filed Nov. 26, 2008); *see also* Comments of AT&T at 84-85.

as a transition to a bill-and-keep system, the Commission can relieve consumers of the burdens of the current systems and empower them, rather than regulators or service providers, to determine the development of communications services. CTIA strongly urges the Commission to affirm the link between intercarrier compensation and broadband and commit to expeditious reform.

V. CONCLUSION

As requested by Mr. Levin and the Commission, detailed above are some concrete suggestions that the Commission can pursue to help facilitate wireless broadband deployment. Additionally, CTIA commits to continue to work to provide the Commission with data on wireless deployment, wireless adoption, and the need for more licensed spectrum.

Respectfully submitted,

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